Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A system comprising:

a plurality of real-time routing ~~server~~ servers to route and process multimedia communication sessions over a network;

a group server to manage the multimedia communication sessions over the network, wherein the group server is ~~coupled to~~ associated with the plurality of routing ~~server~~ servers;

a plurality of end-point processing devices to schedule and conduct multimedia communication sessions over the network, wherein ~~the plurality of~~ each end-point processing ~~devices~~ device is associated with ~~are coupled to the~~ at least routing server and the group server.

2. (Original) The system of claim 1, wherein the network is an Internet Protocol (IP) network, wherein each of the routing server, the group server, and the plurality of end-point processing devices has a separate IP address for identification.

3. (Original) The system of claim 1, wherein the real-time routing server includes dynamic route processing circuitry to dynamically determine a shortest delay path.

4. (Original) The system of claim 1, wherein the real-time routing server in a transit mode can pass through a multimedia communication session without processing data of the multimedia communication session.

5. (Original) The system of claim 1, wherein an end-point processing device of the plurality of end-point processing devices comprises a personal computer operated by a user.

6. (Original) The system of claim 1, wherein an end-point processing device of the plurality of end-point processing devices comprises a dedicated hardware device.

7. (Original) A method for determining a topology of a network, comprising:

obtaining from a group server respective addresses for real-time routing servers to route and process multimedia communication sessions over the network;

setting a static neighbor configuration;

determining a dynamic neighbor configuration based on quality of service levels for respective paths between real-time routing servers, hop counts along paths, delays between real-time routing servers, bandwidth capacity between real-time routing servers, and common path traffic between real-time routing servers.

8. (Original) The method of claim 7, further comprising forming a routing table based on neighbor information.

9. (Original) The method of claim 7, wherein determining the dynamic neighbor configuration is further based on a network administration policy.

10. (Original) The method of claim 7, wherein the operation of determining a dynamic neighbor configuration is repeated when a new real-time routing server is added to the network.

11. (Original) The method of claim 7, wherein determining the dynamic neighbor configuration comprises:

obtaining information regarding quality of service levels for respective paths between real-time routing servers, hop counts along paths, delays between real-time routing servers, bandwidth capacity between real-time routing servers, and common path traffic between real-time routing servers;

rejecting all paths not meeting a quality of service requirement;

sorting candidate real-time routing servers according to distance measurements, including hop counts along paths;

determining whether there is path between a first real-time routing server and a candidate real-time routing server;

determining whether a delay between the first real-time routing server and the candidate real-time routing server is less than a maximum delay;

determining whether a bandwidth capacity between the first real-time routing server and the candidate real-time routing server is greater than a minimum bandwidth capacity;

determining whether the candidate real-time routing server shares a common path with neighbor real-time routing server.

12. (Original) The method of claim 11, wherein the operations of determining whether there is a path, whether a delay is less than a maximum delay, whether a bandwidth capacity is greater than a minimum bandwidth capacity, and whether a common path is shared are repeated for each candidate real-time routing server.

13. (Original) The method of claim 7, wherein the network is an Internet Protocol (IP) network.

14. (Currently Amended) A method for reserving bandwidth and media processing resources, comprising:

checking whether media processing resources on a source real-time routing server are sufficient for a user to join a multimedia communication session in order for the user to communicate with all users participating in the multimedia communication session;

for a multimedia communication session involving multiple real-time routing servers, sending reservation requests from the source real-time routing server to all destination real-time routing servers;

checking for notifications of successful bandwidth reservations for paths from the source real-time routing server to destination real-time routing servers;

checking for notification of successful media processing resource reservations for destination real-time routing servers.

15. (Original) The method of claim 14, wherein the source real-time routing server checks for the notifications of successful bandwidth reservations and media processing resources.

16. (Original) The method of claim 14, wherein the media processing resources are digital signal processing (DSP) resources.

17. (Original) The method of claim 14, wherein if the notifications of successful bandwidth reservations and successful media processing resource reservations are not received with a preset time period, then the notifications are not considered to have been received.

18. (Currently Amended) A method for reserving bandwidth in a network comprising:

receiving at a first real-time routing server a bandwidth reservation request from an upstream real-time routing server;

determining whether at least one downstream path to a destination real-time routing server has enough bandwidth;

if the first real-time routing server is a transit real-time routing server and not a destination real-time routing server, then forwarding the bandwidth reservation request

to a downstream neighbor real-time routing server that has enough bandwidth and leaving a usage count unchanged;

if the first real-time routing server is a destination only real-time routing server or a destination and transit real-time routing server, then reserving bandwidth for a path between the first real-time routing server, and the upstream neighbor real-time routing server;

if the first real-time routing server is not only a transit real-time routing server but also a destination real-time routing server, then forwarding the bandwidth reservation request to a downstream neighbor real-time routing server that has enough bandwidth and incrementing the usage counting by one, wherein the first real-time routing server concurrently functions as a transit server to transfer media data not needing processing and a destination server to process media data needing processing.

19. (Original) The method of claim 18, wherein if a bandwidth reservation request is forwarded to a downstream neighbor real-time routing server, then checking for notification of a successful bandwidth reservation for a path from the first real-time routing server to the downstream neighbor real-time routing server.

20. (Currently Amended) A method for reserving bandwidth in a network comprising:

receiving at a first real-time routing server a bandwidth reservation request from an upstream real-time routing server;

determining whether at least one downstream path to a destination real-time routing server has enough bandwidth;

selecting an upstream neighbor real-time routing server from upstream neighbor real-time routing servers sending a bandwidth reservation request within a predetermined time period;

if the first real-time routing server is a transit real-time routing server and not a destination real-time routing server, then forwarding the bandwidth reservation request to a downstream neighbor real-time routing server that has enough bandwidth and leaving a usage count unchanged;

if the first real-time routing server is a destination only real-time routing server or a destination and transit real-time routing server, then reserving bandwidth for a path between the first real-time routing server and the selected upstream neighbor real-time routing server;

if the first real-time routing server is not only a transit real-time routing server but also a destination real-time routing server, then forwarding the bandwidth reservation request to a downstream neighbor real-time routing server that has enough bandwidth and incrementing the usage count by one, wherein the first real-time routing server concurrently functions as a transit server to transfer media data not needing processing and a destination server to process media data needing processing.

21. (Original) The method of claim 20, wherein selecting an upstream neighbor real-time routing server from upstream neighbor real-time routing servers comprises:

if only one of the upstream neighbor real-time routing servers sending bandwidth reservation requests within the predetermined time period has a maximum usage count, then selecting that upstream neighbor real-time routing server;

if two or more of the upstream neighbor real-time routing servers sending bandwidth reservation requests within the predetermined time period have the maximum usage count, than selecting an upstream neighbor real-time routing server with an earliest arrival time for the bandwidth reservation request.

22. (Original) The method of claim 21, wherein if a bandwidth reservation request is forwarded to a downstream neighbor real-time routing server, then checking for notification of a successful bandwidth reservation for a path from the first real-time routing server to the downstream real-time routing server.